S. Czarnecki, T. Lewiński
Pareto Optimal Design of Non-Homogeneous Isotropic Material Properties for the Multiple Loading Conditions
Physica Status Solidi B: Basic Solids State Physics. 2017   https://doi.org/10.1002/pssb.201600821

Abstract
The stiffest structural elements to resist given systems of loads of prescribed weights are optimally formed from an inhomogeneous isotropic material. The products are cut out from the design domain, thus solving the shape design problem simultaneously. The optimal designs reflect the weights of the loads, see the illustrative design for mutually orthogonal loads of different weights.